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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,443	05/05/2004	German VERGARA LOPEZ	HCL004	3442

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HASSE & NESBITT LLC
7550 CENTRAL PARK BLVD.
MASON, OH 45040

EXAMINER

CORDRAY, DENNIS R

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/709,443	Applicant(s) VERGARA LOPEZ, GERMAN	
	Examiner Dennis Cordray	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/27/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

The Specification and Claims contain numerous reference numbers to a drawing (labeled as Figure 1 in the specification); however no drawings have been submitted. It is noted that a copending application 10/840313, which is a Continuation-in-part of the instant application, contains a drawing (Figure 1) that appears to relate to the instant Specification and Claims. For the purpose of this examination, Figure 1 of copending application 10/840313 will be used to aid in understanding the instant invention.

Specification

The disclosure is objected to because of the following informalities:

In paragraph 14, 6th line, the word "terciary" should be changed to "tertiary."

In paragraph 17, 3rd line, the limitation "1.5 5" should be changed to "1.5-5."

In paragraph 24, 1st line, the abbreviation "N°" should be changed to "No."

In paragraph 29, Table 1, the words "Cationicpolyacrylamide" and "Colloidalsilica" should be changed to "Cationic polyacrylamide" and "Colloidal silica" respectively.

In paragraph 30, last line, the word "client"s" should be changed to "client's."

In paragraph 31, 2nd line, the word "effect" should be changed to "affect."

In paragraph 37, last line, the comma preceding the period should be removed.

In paragraph 38, 3rd line, the duplicate word "the" should be removed from two places

Appropriate correction is required.

Claims 9, 15, 18 and 19 objected to because of the following informalities:

In Claim 9, next to last line, the words "and alcohol" should be changed to "an alcohol."

In Claim 15, 2nd line, the word "addedcontinuously" should be changed to "added continuously."

In Claim 18, 3rd line, the words "linearpolyacrylamide" and "branchedpolyacrylamide" should be changed to "linear polyacrylamide" and "branched polyacrylamide."

In Claim 19, next to last line, the words "theprimary" and "addingthesecondary" should be changed to "the primary" and "adding the secondary."

Appropriate correction is required.

The claims are objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Claims 18 and 19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 18 recites additional species of a polyvinylamine and architecture polymer, which are not included in Claim 1, thus the claim expands rather than limits the parent claim.

Claim 19 recites "the step of adding the primary retention and drainage agent precedes the step of adding the secondary retention and drainage agent" in the process of Claim 1. Claim 1 recites a step of adding the secondary retention and drainage agent "and then" adding a primary retention and drainage agent, indicating that the step of adding the primary retention and drainage agent cannot precede the step of adding the secondary retention and drainage agent. Thus, Claim 19 expands rather than limits the parent claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "...and three-dimensional modeling polymer, which is able to flocculate the stock." It is not clear whether the phrase "which is able to flocculate the stock" refers to the three-dimensional modeling polymer or to any of the listed retention and drainage agents.

Claim 3 recites the limitations "before a fan pump" and "before, inside and after a pressure screen." The meanings of these limitations is unclear since preceding claims refer to "the fan pump" and "the pressure screen." In contrast, the Specification describes multiple fan pumps and multiple pressure screens in paragraph 43. The Specification also describes in paragraph 44 locations where drainage and retention agents can be added that include a fan pump 80 and the pressure screen 90. It is thus unclear how many addition points are contemplated in the claim and where they occur in the papermaking process.

Claim 6 recites the limitation "the level of smectite added" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites "a polycarboxylic compound." It is unclear what is meant by the term. Does the term refer to a polycarboxylic acid, the salt of a polycarboxylic acid or another polycarboxylic acid derivative.

Regarding claims 9, 11 and 13, the word "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 12 recites the limitation "a composition comprising the secondary retention and drainage agent" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "another three-dimensional modeling or architecture polymer" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langley et al (4753710) in view of Langley et al (4305781).

Langley et al ('710) discloses a process for retention and drainage of stock for manufacturing paper and paperboard (Abstract) comprising:

Adding a bentonite material to the stock, which aids in optimizing retention (inherently able to retain fines colloidal particles and organic or inorganic compounds present in the stock, since that is the definition of a retention aid) (col 7, lines 53-56), and

Adding a cationic polymer that can be acrylamide (col 8, lines 1-7, 46-52). The polyacrylamide is a flocculant (col 1, lines 63-64). The drainage and retention additives

can be used over a wide range of pH values (col 5, line 67 to col 6, line 1). The environment is inherently either acid, neutral or alkaline.

The cationic polymer is added in an amount from 0.01 to 0.05 % of the dry weight of the paper (91-454 g/ton) and the bentonite is added in an amount from 0.03 to 0.5 % (272 to 4540 g/ton) (col 9, lines 18-21 and col 6, lines 44-46).

The bentonite is usually added after a shear stage, the shear stages being a cleaning stage, mixing pump, fan pump or screen (col 5, lines 41-48 and col 7, lines 12-20). Thus, the bentonite can be added at any point after point 1b, the suction of the stock tank pump, to point 10c, after the pressure screen. The bentonite can also be added partly before a shear stage and partly after (col 7, lines 63-68). The cationic polymer is added at a point before the bentonite (which can be any point before the exit of the pressure screen) or into the thin stock (col 7, lines 15-33).

The bentonite is preferably montmorillonite (col 10, lines 47-50).

Langley et al ('710) does not disclose that the bentonite is added before the cationic polymer. Langley et al ('710) also does not disclose continuous addition of either the bentonite or the cationic polymer.

Langley et al ('781) discloses a drainage and retention system comprising adding bentonite and a polyacrylamide to a papermaking slurry wherein the bentonite is added before the polyacrylamide (col 3, lines 27, and 66-68; col 4, lines 3-6).

Langley et al ('710), Langley et al ('781) and the instant invention are analogous as pertaining to drainage and retention agents comprising bentonite. It would have been obvious to a person of ordinary skill in the art to add the cationic polymer and the

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bentonite in any order to the papermaking suspension of Langley et al ('710) in view of Langley et al ('781) as a functionally equivalent alternative. Since papermaking is a normally continuous process, it would also have been obvious to add the cationic polymer and the bentonite continuously to the papermaking stock.

Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langley et al (4753710) in view of Langley et al (4305781) and further in view of Chung (5484834).

Langley et al ('710) and Langley et al ('781) do not disclose that the bentonite is supplied in the form of an aqueous composition containing a dispersant. Langley et al ('710) does disclose that the bentonite is usually added as an aqueous suspension made by dispersing powdered bentonite in water (col 11, lines 12-16).

Chung discloses a liquid slurry of bentonite that is used as a retention and drainage agent in papermaking that comprises about 15-13% by weight bentonite, about 25-75% by weight water, about 10-30% by weight polyacrylate, and about 0.1 to 10% by weight sodium silicate (col 1, lines 3-12). The dispersion is made at a temperature between 50 and 90 °C (col 2, lines 41-46). Chung teaches that using a liquid slurry overcomes the health risk problems associated with using dry bentonite (col 2, lines 6-12).

Langley et al ('710), Langley et al ('781), Chung and the instant invention are analogous as pertaining to drainage and retention agents comprising bentonite. It would have been obvious to a person of ordinary skill in the art to add the bentonite in

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an aqueous slurry of the claimed composition to the papermaking suspension of Langley ('710) in view of Langley et al ('781) and further in view of Chung to mitigate the health risks of using dry bentonite. It would also have been obvious to add the slurry at the claimed temperature to keep the suspension stable. It would be obvious to use a premixed suspension from a supplier to eliminate the health risks of handling of the bentonite powder at the papermaking plant.

Double Patenting

Claims 1-20 of this application conflict with claims 1-20 of Application No. 10/840313. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

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Claims 1-20 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-20 of copending Application No. 10/840313. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure [Lamar et al (4964955), Honig et al (5167766), Chung (5629368), Chung (5810971), Pruszynski et al (6033524), McLaughlin (6193844), Hallstrom (US 2002/0139502)]. They pertain to other retention and drainage systems that use bentonite.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DRC



STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700